II. Remarks

Reconsideration and allowance of the subject application are respectfully requested.

Claims 1-40 and 42-51 are pending in the application. Claims 1, 17, and 19-27 are independent.

Claims 1-40 and 42-51 were rejected as being unpatentable over Kenyon '562, Ishihara, and Mobin, for the reasons discussed on pages 2-14 of the Office Action. Applicants respectfully traverse all art rejections. The Examiner kindly indicated that Claim 41 contains allowable subject matter. Therefore, while specifically traversing the art rejections, and preserving Applicants' right to file a continuation application to pursue the broad but patentable claims, Applicants have incorporated subject matter from the allowable dependent claim 41 into independent Claims 1, 20, 23, and 27 solely to secure immediate allowance thereof.

Each of the independent Claims 17, 21, and 24 recites a novel combination of structure and/or steps whereby a **video** stream is input which corresponds to a video screen having a plurality of regions, the video screen comprising a plurality of pixels having **intensity and/or color**. First, **the pixel values of** at least one of the intensity and the color of the video signals corresponding to each of the plural areas of the video screen **are summed**. Next, a set of low rate time series feature **waveforms** are formed from the

23

pixels summed over each of the plural areas of the video screen. Thereafter, overlapping time intervals of the multiple feature **waveforms** are formed such that the overlapping time intervals encompass the entire received video frame sequence. The most distinctive information from each time interval is obtained, and the features of the time interval segments are rank-order according to their **information content**. The rank-ordered features of each of the time interval segments are transformed to produce complex spectra. Finally, the transformed complex spectra are stored as video features.

Neither <u>Kenyon</u> nor <u>Ishihara</u> discloses or suggests (either individually or in combination) at least the following:

1. summing the pixel values of at least one of the intensity and the color of the video signals corresponding to each of the plural areas of the video screen; (In <u>Kenyon</u>, each element of an input *audio* spectragram is divided by the sum of all elements to normalize the spectragrams prior to comparison with stored spectragrams – this has nothing to do with summing video intensity and/or color pixel values to form low rate time series feature waveforms, as in the present invention.)

2. overlapping the time intervals of the multiple feature waveforms such that the overlapping time intervals encompass the entire received video frame sequence; (These

24

features are simply not present in either <u>Kenyon</u> or

<u>Ishihara</u>.)

3. obtaining the most distinctive information from each time interval, and then rank-ordering the features of the time interval segments according to their information content; (These features are simply not present in either <u>Kenyon</u> or <u>Ishihara</u>.)

Moreover, Applicants respectfully submit that no convincing rationale has been shown on the record which would motivate the person of ordinary skill in the art to combine <u>Kenyon</u> with <u>Ishihara</u> in the manner proposed. The Office Action only recites such motivation as "providing the system with increases flexibility." Respectfully, such "motivation" is overbroad and would allow the Examiner to combine <u>Ishihara</u> with any reference to produce all possible combinations. The law is not so broad. It is well established that, in order to sustain a rejection under 35 USC §103, it is the burden of the USPTO to establish a *prima facie* case of obviousness, *In re Reuter*, 651 F.2d 751, 210 USPQ. 249 (CCPA 1981).

Accordingly, Applicants respectfully submit that Claims 17, 21, and 24 (and their dependent claims) are fully patentable over the cited art.

Each of the independent Claims 19, 22, and 25 recites a novel combination of structure and/or function including forming overlapping time intervals of the multiple feature streams (e.g., see the embodiment depicted in Fig.

25

10) such that the overlapping time intervals <u>used to</u> <u>construct templates</u> encompass the **entire** received <u>stored</u> audio stream. In <u>Kenyon</u>, no overlapping time intervals of the multiple feature streams are formed in the construction of templates. Also, <u>Kenyon</u> only stores reference patterns for a small portion of the audio work, **<u>not the entire audio</u>** **<u>stream</u>**. This requires that the unknown input stream is monitored continuously using overlapping intervals.

Neither <u>Kenyon</u> nor <u>Ishihara</u> discloses or suggests (either individually or in combination) at least the following:

1. forming overlapping time intervals of the multiple feature streams such that the overlapping time intervals used to construct templates encompass the entire received stored audio stream; (These features are simply not present in either <u>Kenyon</u> or <u>Ishihara</u>.)

2. rank-ordering the features of the time interval segments according to their information content(e.g., distinctiveness). (While <u>Kenyon</u> compares the input audio signal with candidate stored spectragrams, which stored spectragrams are rank-ordered by their similarity to the received broadcast song, this has nothing to do with rank-ordering the time interval segments of the input signal according to their information content.)

26

Accordingly, Applicants respectfully submit that Claims 19, 22, and 25 (and their dependent claims) are fully patentable over the cited art.

Independent Claim 26 recites a novel combination of structure and/or function whereby a plurality of feature time series waveforms, which respectively correspond to distinct portions of the received input data stream, are formed. Multiple feature streams are formed from the plurality of feature time series waveforms, and overlapping time intervals of the multiple feature streams are then formed. The distinctiveness of each feature in each time interval is estimated, and the features are rank-ordered according to their information content. The feature time series waveforms are then transformed to obtain complex spectra, and the feature complex spectra are stored as the recognition features. In contrast, <u>Kenyon</u> does not form any overlapping time intervals of multiple feature streams. Also, <u>Kenyon</u> forms <u>correlation</u> feature streams from a single time series waveform, not a plurality of time series waveforms.

Neither <u>Kenyon</u> nor <u>Ishihara</u> discloses or suggests (either individually or in combination) at least the following:

1. forming overlapping time intervals of the multiple feature streams; (These features are simply not present in either <u>Kenyon</u> or <u>Ishihara</u>.)

2. estimating the distinctiveness of each feature

27

in each time interval; (These features are simply not present in either <u>Kenyon</u> or <u>Ishihara</u>.)

3. rank-ordering the features according to their information content; (While <u>Kenyon</u> compares the input audio signal with candidate stored spectragrams, which stored spectragrams are rank-ordered by their similarity to the received broadcast song, this has nothing to do with rank-ordering features in each time interval of the input signal according to their information content.)

Accordingly, Applicants respectfully submit that Claim 26 (and its dependent claims) are fully patentable over the cited art.

In view of the above amendments and remarks, it is believed that this application is now in condition for allowance, and a Notice thereof is respectfully requested.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 625-3507. All correspondence should continue to be directed to our address given below.

Respectfully submitted,

_/Richard P. Bauer/_____
Attorney for Applicants
Richard P. Bauer
Registration No. 31,588

PATENT ADMINISTRATOR
KATTEN MUCHIN ROSENMAN LLP
1025 Thomas Jefferson Street, N.W.
East Lobby, Suite 700
Washington, D.C. 20007-5201